

**Amendments in the Claims:**

Please cancel claims 2-3, 8-9, 11-12, 16, 20-21, 23-24, 27-30, 32, and 36-37 without prejudice or disclaimer.

This listing of claims will replace all prior versions and prior claim listings in the above-identified application:

1. (currently amended) A method for imaging tumor vasculature in a mammal comprising
  - a) administering to the mammal a composition which comprises a molecule capable of detecting angiopoietin-2 (Ang-2) nucleic acid or polypeptide coupled to an imaging agent;
  - b) allowing the composition to accumulate at the tumor vasculature; and
  - c) detecting the accumulated composition so as to image the tumor vasculature.
- 2-3. (cancel)
4. (original) The method of claim 1 wherein the accumulated composition is detected by a detector selected from the group consisting of a conventional scintillation camera, a gamma camera, a rectilinear scanner, a PET scanner, a SPECT scanner, a MRI scanner, a NMR scanner, and an X-ray machine.
5. (original) The method of claim 1 wherein the imaging agent is a radionuclide or a chelate.
6. (currently amended) A method of causing tumor cell death by targeting tumor vasculature comprising administering to a mammal a composition which comprises a molecule capable of detecting angiopoietin-2 (Ang-2) nucleic acid or polypeptide coupled to an agent capable of causing tumor cell death.
7. (currently amended) A method of causing vascular endothelial cell death by targeting tumor vasculature comprising administering to a mammal a composition which comprises a molecule capable of detecting angiopoietin-2 (Ang-2) nucleic acid or polypeptide coupled to an agent capable of causing vascular endothelial cell death.
- 8-9. (cancel)
10. (original) The method of claim 6 wherein the agent capable of causing tumor cell death is selected from the group consisting of carboplatin, cisplatin, vincristine, methotrexate, paclitaxel,

docetaxel, 5-fluorouracil, UFT, hydroxyurea, gemcitabine, vinorelbine, irinotecan, tirapazamine, and matrilysin.

11-12. (cancel)

13. (original) The method of claim 7 wherein the agent capable of causing vascular endothelial cell death is selected from the group consisting of gelonin, ricin A, ricin B, saporin, bryodin 1, bryodin 2, momordin, pokeweed antiviral protein from seeds (PAP-S), trichokirin, and abrin.

14. (original) The method of claim 1, 6, or 7 wherein the mammal is a human.

15. (currently amended) The method of claim 1, 6, or 7 wherein the molecule capable of detecting Ang-2 polypeptide is selected from the group consisting of a monoclonal antibody, an antibody fragment, and a single chain fv a Tie 1-Fc receptorbody polypeptide, a Tie 2-Fc receptorbody polypeptide, a Tie 1 receptor fragment polypeptide containing an Ang-2 binding domain, and a Tie 2 receptor fragment polypeptide containing an Ang-2 binding domain.

16. (cancel)

17. (original) The method of claim 1, 6, or 7 wherein the composition is administered to a mammal with a carrier suitable for parenteral administration.

18. (original) The method of claim 17 wherein the mammal is a human.

19. (currently amended) The method of claim 2, 8, or 9 wherein the molecule capable of detecting Ang-2 nucleic acid is an mRNA or a synthetic oligonucleotide.

20-21. (cancel)

22. (currently amended) A kit for imaging tumor vasculature in a mammal comprising a composition which comprises a molecule capable of detecting angiopoietin-2 (Ang-2) nucleic acid or polypeptide coupled to an imaging agent.

23-24. (cancel)

25. (currently amended) A kit for targeting tumor vasculature in a mammal comprising a composition which comprises a molecule capable of detecting angiopoietin-2 (Ang-2) nucleic acid or polypeptide coupled to an agent capable of causing tumor cell death.

26. (original) A kit for targeting tumor vasculature in a mammal comprising a composition which comprises a molecule capable of detecting Ang-2 nucleic acid or polypeptide coupled to an agent capable of causing vascular endothelial cell death.

27-30. (cancel)

31. (currently amended) The kit of claim 22, 25, or 26 wherein the molecule capable of detecting Ang-2 polypeptide is selected from the group consisting of a monoclonal antibody, an antibody fragment, and a single chain fv, a Tie 1-Fc receptorbody polypeptide, a Tie 2-Fc receptorbody polypeptide, a Tie 1 receptor fragment polypeptide containing an Ang-2 binding domain, and a Tie 2 receptor fragment polypeptide containing an Ang-2 binding domain.

32. (cancel)

33. (original) The kit of claim 22, 25, or 26 wherein the composition is administered to a mammal with a carrier suitable for parenteral administration.

34. (original) The kit of claim 33 wherein the mammal is a human.

35. (currently amended) The kit of claim ~~23, 27, or 28~~ 22, 25 or 26 wherein the molecule capable of detecting Ang-2 nucleic acid is an mRNA or a synthetic oligonucleotide.

36-37. (cancel)